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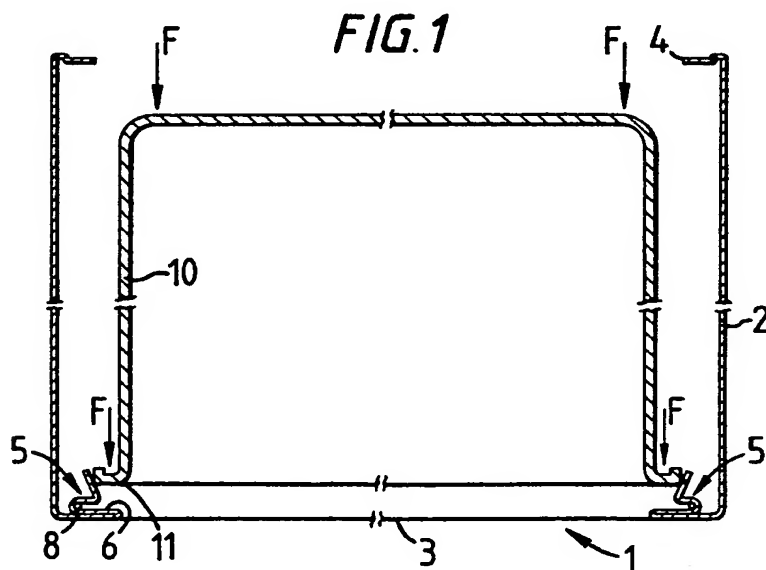
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**F4H**  
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(54) **Improvements in refrigerators**

(57) A refrigerator comprising a casing 2 having a section member 5 extending and forming a border around an access opening 3, a seat 6 being formed in the section member for receiving a peripheral edge 11 of the refrigerating chamber 10. To facilitate assembly of the chamber 10, the section member is formed with an inclined wing (13) forming a surface for facilitating insertion of the peripheral edge 11 of the chamber 10. The section member 5 houses a tube 8 for locally heating a seal for an access door.



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FIG. 1

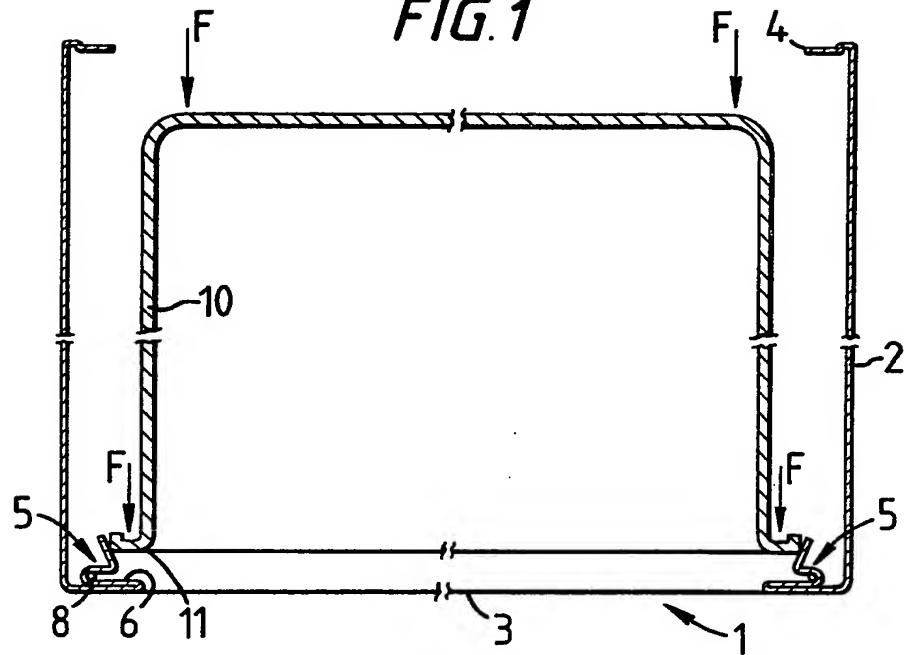


FIG. 2

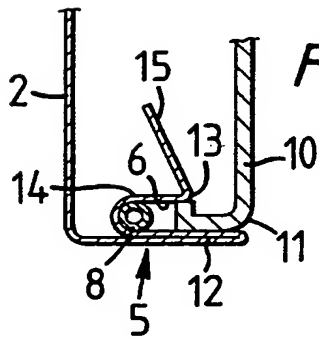
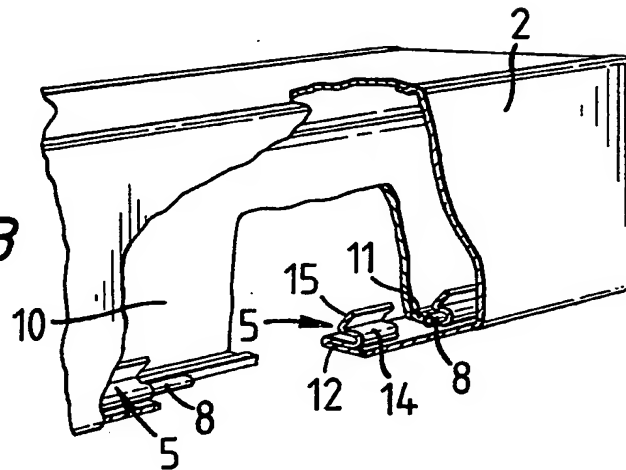


FIG. 3



## SPECIFICATION

### Improvements in refrigerators

- 5 The invention relates to a refrigerator of the kind comprising a casing having an access opening, a section member secured to the casing and extending around the opening, a seat formed in the section member and facing the opening and a refrigerating chamber having a peripheral edge projecting towards the exterior and mounted in the casing so that the said edge is received in the said seat.

- 10 In conventional refrigerators, the section member defining the aforementioned seat has a "C" shape and is formed integrally with the sheet metal forming the casing and has a first wing in line externally with the wall of the casing formed with the aperture and a second wing set further back. The two wings project into the casing for different distances; the second wing projects further.

- 15 This feature is associated with the conventional methods of assembling refrigerators, where the casing is presented to the fitter with its opening upwards and the chamber is inserted through the opening. The chamber is then manually deformed so that the peripheral edge can pass over the first wing and abut the second. The edge of the chamber is then inserted into the seat, using a mallet.

- 20 As the preceding shows, in the conventional methods human intervention is practically indispensable for fitting the chamber into the casing. However, there is an increasingly-felt need to automate the maximum number of steps in the assembly of refrigerators.

- 25 Human intervention could be replaced by corresponding mechanical intervention by using equipment at present available in the prior art. However, owing to the complexity of the technology required for the aforementioned phase, the refrigerator would be excessively expensive to manufacture as a result.

- 30 Up to now, therefore, it has been accepted willy-nilly that the previously-used methods must be used in the step of assembling the chamber.

- 35 The object of the invention is to provide a refrigerator having a structure such that the chamber is easier to fit into the frame, as a step towards eventual mechanized assembly.

- 40 This object is achieved by a refrigerator of the aforementioned kind, characterised in that the section member is formed with an inclined wing forming a surface for facilitating insertion of the peripheral edge into the seat.

- 45 Advantageously, the inclined wing extends from the section member towards the interior of the casing.

- 50 In that case the chamber can be assembled from the back of the casing simply by pressing the chamber towards the aperture.

- 55 The characteristics and advantages of the invention will be clearer from the following de-

tailed description of a preferred embodiment illustrated by way of non-limitative example with reference to the accompanying drawings in which:

- 60 Fig. 1 is a diagrammatic view in cross-section of a refrigerator according to the invention, shown in the step of fitting the chamber into the casing;

- 65 Fig. 2 shows a larger-scale detail of the device in Fig. 1 when the chamber has been fitted, and

- 70 Fig. 3 is a partial perspective view, partly cut away, of the refrigerator shown in the preceding drawings.

- 75 With reference to the drawings, a refrigerator (general reference 1) comprises a sheet-metal casing 2 having a front access opening 3 and a rear opening 4 on the other side. Opening 3 is normally closed by a door (not shown) fitted with a suitable seal.

- 80 A section member 5 extends around opening 3 and is formed integrally with casing 2, e.g. by suitably shaping the corresponding sheet-metal wall thereof.

- 85 Section-member 5 is formed with a seat 6 facing aperture 3. A tube 8 for locally heating the seal in the access door is disposed at the bottom of seat 6.

- 90 A refrigerating chamber 10, preferably of moulded plastics, is mounted inside casing 2. Chamber 10 is open opposite the access opening 3, where it has a continuous peripheral edge 11 projecting towards the exterior.

- 95 When chamber 10 is fitted into casing 2, edge 11 is received in seat 6.

- 100 To facilitate assembly of chamber 10 and enable the process to be eventually automated, section member 5 is formed with a first wing 12 in line with the corresponding outer wall of casing 2 and a second wing 13 disposed inside the casing and formed with a first section 14 parallel to wing 12 and a second inclined section 15 forming a surface for facilitating the insertion of edge 11 into seat 6.

- 105 The wing sections 15 of members 5 disposed on opposite sides of aperture 3 extend away from one another towards the interior of casing 2.

- 110 In order additionally to facilitate assembly of chamber 10, wing 12 projects into opening 3 for a greater distance than the wing section 13 parallel thereto.

- 115 Chamber 10 is inserted into casing 2 through the rear aperture 4 and positioned so that edge 11 abuts the insertion surface constituting the inclined section 15 of wing 13.

- 120 By simply exerting pressure on chamber 10 in the direction of aperture 3 (arrows F), chamber 10 is locally deformed at edge 11 until the edge travels over the second wing 13 and abuts the first wing 12 and occupies seat 6.

- 125 The first wing 12, which projects to a great extent into seat 3, acts as a stop for

edge 11 so as to prevent chamber 10 travelling past wing 12 and through aperture 3 during assembly.

To facilitate assembly of chamber 10, section member 5 is discontinuous at the corners of aperture 3.

The invention enables radical modifications to be made in the method of fitting the chamber into the casing of a refrigerator, thus sparing the operator the laborious operations of locally deforming the edge of the chamber. The chamber is fitted by simple pressure, which can easily be exerted manually or by conventional, economic automatic machinery.

#### CLAIMS

1. A refrigerator comprising a casing having an access opening, a section member secured to the casing and extending around the opening, a seat formed in the section member and facing the opening and a refrigerating chamber having a peripheral edge projecting towards the exterior and mounted in the casing so that the said edge is received in the said seat, characterised in that the section member is formed with an inclined wing forming a surface for facilitating insertion of the peripheral edge into the seat.

2. A refrigerator according to claim 1, characterised in that the inclined wing extends from the section member towards the interior of the casing.

3. A refrigerator according to claim 2, characterised in that the remaining wing of the section member projects into the aperture for a greater distance than the inclined wing.

4. A refrigerator according to one or more of the preceding claims, characterised in that the section member is formed integrally with the casing.

5. A refrigerator substantially as hereinbefore described with reference to, and as shown in, the accompanying drawings.

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